LEVIN, Mark Mironovich, prof.; ZADOROZHNYY, B.A., dotsent, red.;
BELOUSOV, V.A., prof., red.; BOKARIUS, N.N., prof., red.;
VOROB'YEV, F.P., assistent, red.; GRISHCHENKO, I.I., prof., red.;
DERKACH, V.S., prof., red.; KORSUN', A.Ya., dotsent, red.;
KOSHKIN, M.L., prof., red.; KUDINTSEV, V.I., dotsent, red.;
PIKIN, K.I., prof., red.; PRIKHOD'KOVA, Ye.K., prof., red.;
POPOV, I.D., dotsent, red.; SOLOV'YEV, M.N., prof., red.;
SHTEYNBERG, S.Ya., prof., red.; KHARCHENKO, N.S., prof., red.

[Repeated surgery in stomach diseases following operations]
Povtornye operatsii pri zabolevaniiakh operirovannogo zheludka.
Khar'kov, Izd-vo Khar'kovskogo gos.univ., 1961. 177 p.
(Kharkov. Medychnyi institut. Trudy, vol.58). (MIRA 16:2)
(STOMACH--SURGERY)

SHTEYNBERG, S.Ya., prof.; DOTSENKO, Ya.N.;

New method of determining glycoproteins in the blood serum and plasma. Vrach.delo no.12:43-45 D '62. (MIRA 15:12)

1. Fakul'tetskaya terapevticheskaya klinika (zav. - prof. S.Ya. Shtenberg) Khar'kovskogo meditsinskogo instituta.
(GLYCOPROTEINS)(BLOOD--ANALYSIS AND CHEMISTRY)

SHTEYNBERG, S.Ya., prof. (Khar'kov)

Water-salt metabolism. Vrach. delo no.11:3-8 N'63
(MIRA 16:12)

SHTEYNBERG, S. Ye.

b **Wood treatment.** S. E. Shteinberg and A. I. Folomin. U.S.S.R. 103,493, Sept. 25, 1956. To preserve wood, prevent its rot, and reduce its hygroscopicity, wood is treated in an open tub with petrolatum heated to 105–40° until it attains the desired moisture content. It is then transferred into an open tub contg. anthracene oil at 80–90°. If rot prevention is not essential, the anthracene oil treatment can be omitted. For certain requirements, the treatment in petrolatum should be carried out at up to 230°. c

M. Hosch

2

[illegible], S.Ya., kand. [illegible]

Bent and glued bearing constructions for prefabricated structures. Der. prom. 14 no.6:13-14 Je '65. (MIRA 18:7)

SHTEYNBERG, S.Ye., inzhener.

Practices of high temperature drying of wood in petrolatum.
Der. prom. 5 no.10:6-8 O '56. (MLRA 9:11)

(Lumber--Drying) (Petrolatum)

UGOLEV, B.N., kand. tekhn. nauk; SHTEYNBERG, S.Ye., inzh.

Internal stresses in wood caused by high-temperature drying in petrolatum. Der. prom. 8 no.7:11-13 Jl '59.
(MIRA 12:9)

1. Moskovskiy lesotekhnicheskiy institut (for Ugolev)
(Lumber--Drying)

SHTEYNBERG, S.Ye., kand.tekhn.nauk

Effect of pine drying at high temperatures in petrolatum on its hygroscopicity. Der.prom. 11 no.5:14-15 My '62. (MIRA 15:5)
(Pine) (Hygroscopicity)

SOV/161-58-3-21/27

16(1)

AUTHOR: Shteynberg, Sh. Ye., Chief Engineer

TITLE: On Some Methods of the Approximation of Transition Functions of Aperiodic Terms (O nekotorykh metodakh aproksimatsii perekhodnykh funktsiy aperiodicheskikh zven'yev)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Elektromekhanika i avtomatika, 1958, Nr 3, pp 199 - 204 (USSR)

ABSTRACT: Methods of approximating the curves of transition functions have recently been published, by means of which the characteristic of elements of the system may be obtained. In some cases the approximation of the time characteristic of aperiodic elements of the system can be carried out by simple means. A diagram of such a function is shown (Fig 1), and the function is written down in a general form with time as a variable. Next, the coefficients are determined, and the equation is simplified by means of a substitution. A diagram (Fig 2) is used for the purpose of determining the coefficients. An approximation function is then written down, and a diagram shows the original function and its approximation (Fig 4). The error is very small. In conclusion, the influence

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On Some Methods of the Approximation of Transition Functions of Aperiodic Terms SOV/161-58-3-21/27

of the terms of higher order is dealt with according to a somewhat modified kind of approximation function. This method is illustrated by means of a diagram. On the basis of an example, the case is then investigated in which the function has a single discontinuity. There are 4 figures and 4 Soviet references.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii (Central Institute for the Scientific Research of the Entire Range of Automation)

This article was recommended by the Kafedra teplovogo kontrolya i avtomatiki Moskovskogo energeticheskogo instituta (Chair of Heat Control and Automation of the Moscow Institute of Power Engineering)

SUBMITTED: June 4, 1958

Card 2/2

KRUG, Yelena Karlovna; MININA, Ol'ga Mikhaylovna [deceased]; SHTEYNBERG, Sh.Ye., retsenzent; ROZENBERG, L.A., red.; BUL'DYAYEV, N.A., tekhn. red.

[Electrical controllers in industrial automatic control systems] Elektricheskie reguliatory promyshlennoi avtomatiki. Moskva, Gosenergoizdat, 1962. 334 p. (MIRA 15:10)
(Automatic control) (Electric controllers)

SHTEYNBERG, Sh.Ye.

Frequency methods for the plotting of transient processes in nonlinear systems of automatic control. Trudy MIKHM 25: 42-47 '63. (MIRA 17:6)

SHTEYNBERG, T. A. and ZEL'DICH, L. Ye and GUTNITSKAYA, P. M.

Shteynberg, T. A. and Zel'dich, L. Ye and Gutnitskaya, P. M. "Treating dystrophy in children with 'aminostimulin'", Vracheb. delo, 1949, No. 5, paragraphs 425-30.

SO: U-4630, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

SHTEYNBERG, T. A.

"Study of the Treatment of Chronic Dysentery in Special Children's Homes," Pediatriya, Adusherstvo i Ginekologiya, Vol 2, 1952, pp 6-11.

SHTEYNBERG, T. A.; ASKALONOV, S. P.; NISHCHA, S. Ya.

"The Use of Acidophylus Milk for Dysentery in Children," Pediatriya, Akusherstvo i Ginekologiya (Pediatrics, Obstetrics, and Gynecology), Vol 2, 1952, p 16.

SHTEYNBERG, TS.B., inzh.

The automatization of woodworking processes. Mekh. trud. rab. 11 no.10:8-10 O '57. (MIRA 10:11)

(Woodwork)

SHTEYNBERG, TS.B., inzh.

Improve the technological processes in manufacturing skis.
Der. prom. 7 no. 7:8-10 Jl '58. (MIRA 11:8)

1. Giprodrevprom.
(Skis and skiing)

[illegible], [illegible], [illegible].

Steel - Heat Treatment

Effect of the heterogeneous structure of steel upon temperature distribution in heating by means of an electric current. Trudy Inst. fiz. met. No. 13, 1951.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

SHTEINBERG, T. S.

"Oscillations of a Nonlinear System With One Degree of Freedom When Friction Is Present." Cand Phys-Math Sci, Ural State U, Sverdlovsk, 1954. (RZhMekh, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

FD-1090

USSR/Engineering - Mechanics

Card 1/1 Pub. 41-2/17

Author : Shteynberg, T. S.

Title : On the periodic solutions of a differential equation of nonlinear oscillations in the presence of forces of "dry" and "viscous" friction.

Periodical : Izv. AN SSSR, Otd. tekh, naul 4, 13-22, April 1954

Abstract : Investigates differential equation of nonlinear oscillations in the presence of forces of "dry" and "viscous" friction. The equation has the form: $\ddot{x}$ $2n\dot{x}$ k^2x $\delta m + p\ (x,\dot{x})$, with the usual conditions. Two references. Diagrams.

Institution :

Submitted : April 7, 1954

S/179/60/000/
E031/E535

AUTHOR: Shteynberg, T.S. (Sverdlovsk)

TITLE: The Method of the Small Parameter for Second Order Differential Equations with Discontinuous Terms 10

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1960, Nr 1, pp 106-112 (USSR)

ABSTRACT: This paper is a continuation of earlier work (Ref 2) in which the author generalized the method of the small parameter for a system of two equations whose right hand sides had first order discontinuities along some curve. The equation

$$\ddot{x} + k^2(\dot{x})\, x = \mu F(x,\dot{x}) \qquad (1.1)$$

where

$$k^2(\dot{x}) = \begin{cases} k_1^2 & \text{for } \dot{x} \leqslant f(x) \quad (k_1 = \text{const}) \\ k_2^2 & \text{for } \dot{x} \geqslant f(x) \quad (k_2 = \text{const}) \end{cases}$$

is considered. The function f(x) is a single-valued analytical function and μ is a small parameter. F(x,y) ✓

Card 1/2

SHTEYNBERG, V.

Auditing

"Shortening the periods of compilation and improving the quality of accounts of local subordinate enterprises and organizations," Bukhg. uchet, No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952, Unclassified.

SHTEYNBERG, V., inzhener; PERCHONOK, L.

Electric heater on telescopic stand. Stroitel' 2 no.6:23 Je '56.
(Electric heating) (MLRA 10:1)

SHTEYNBERG, V., inzhener; PERCHONOK, L., inzhener.

Parquet sanding machine. Stroitel' 2 no.10:19 O '56. (MLRA 10:1)
(Grinding and polishing) (Parquet floors)

SHTEYNBERG, V., inzhenr..

Gypsum mixer. Stroitel' 2 no.11:13 N '56. (MLRA 10:1)
(Mixing machinery) (Gypsum)

SHTEYNBERG, V.

Gun for applying putty. Stroitel' no.7:22 Jl '57. (MLRA 10:9)
(Putty)

SHTEYNBERG, V., inzh.

New methods for facing surfaces with plaster board. Stroitel' no.7:
15-18 Jl '58. (MIRA 11:9)
(Plaster board)

SHTEYNBERG, V., inzh.

Tiling. Stroitel' no.5:6-7 My '59. (MIRA 12:8)
(Czechoslovakia--Tiles)

SHTEYNBERG, V., inzh.

"Relin" floors. Stroitel' no.9:24 S '59. (MIRA 13:3)
(Floors, Concrete) (Floor coverings)

SHTEYNBERG, V., inzh.

"Cement" façade paints. Stroitel' no.9:7 S '60.
(MIRA 13:9)

(Façades) (House painting)

1. SHTEYNBERG, V. A.

2. USSR (600)

4. Latvia - Communist Party

7. From the history of the struggle of Latvian bolsheviks for the victory of the October Revolution in the first period of organizing it. Latv PSR Zin Akad Vestis No. 10 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

SHTEYNBERG, V. B.

57-2-27/32

AUTHORS: Gurevich, M. A., Shteynberg, V. B.

TITLE: The Flame Temperature of a Single Drop of Liquid Fuel (Temperatura plameni odinochnoy kapli zhidkogo topliva)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 2, pp.394-401 (USSR)

ABSTRACT: The attempt was made here to measure the maximum temperature in the combustion zone of individual drop. The measurements were performed in a series of falling drops of equal dimensions. For this purpose the authors used the test-apparatus constructed already earlier by I. G. Malenkov, Student-Diplomant, in the Laboratory of the Institute. The authors employed the optical method of measurement with colors. For this a color-pyrometer with small inertia was used. It had been developed in 1948 - 1952 in the same Laboratory. A short description of it is given. The optical measuring method was here extended for the case of the measurement of a color-temperature of sources with a small light-intensity. Its advantages in comparison to the ordinary measuring method are given: 1.) The pos-

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57-2-27/32

The Flame Temperature of a Single Drop of Liquid Fuel

sibility of carrying out measurements with weak light-sources, 2.) much lower demands on the isolation of the point A, 3.) automatic consideration of the distortions brought in by foreign permanent light-sources, 4.) a simple method of controlling the sufficient linearity of the light-characteristics of photoelectric cells. The influence of the temperature gradient and the selectivity of flame-emission is investigated. The measured value of the color temperature may essentially differ from the maximum flame-temperature for two fundamental reasons: due to the emission of the colder flame-layers and due to the selectivity of the flame-emission. It is shown how a rough evaluation of the deviations to be expected is obtained by way of calculation. It is shown that for this purpose the coefficient of flame-absorption and the exponent n must approximately be determined. - The performed measurements confirmed that the maximum temperature in the flame of an individual point is considerably lower than that of the diffusion theory. This difference is certainly not less than 500°C and is considerably higher at a higher oxygen-content in the gas medium. Two fundamental conditions may explain the fact that

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57-2-27/32

The Flame Temperature of a Single Drop of Liquid Fuel

the actual velocities of evaporation in the drop coincide with those of the calculation according to the diffusion theory, whereas the temperature in the combustion zone is much lower than that according to calculation. 1.) The diffusion theory does not take into account the heat-exchange by radiation. The flame-emission from the outer layers leads to a decrease in the flame-temper ature and the emission on the drops and to an increase in the velocity of evaporation. 2.) A consideration of the finite velocity of the chemical reaction practically leads to the same velocities of evaporation according to calculation, but to considerably lower flame-temperatures. Both facts no doubt are important. It would, however, be important to determine which of the two is the most essential factor. There are 9 figures, and 3 references, 1 of which is Slavic.

ASSOCIATION: **Leningrad Polytechnical Institute,** imeni M. I. Kalinin (Leningradskiy politekhnicheskiy institut im. M. I. Kalinina)

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57-2-27/32

The Flame Temperature of a Single Drop of Liquid Fuel

SUBMITTED: July 25, 1957

AVAILABLE: Library of Congress

1. Flame-Temperature-Measurement 2. Fuel-Test methods
3. Fuel-Test results

Card 4/4

SHTEYNBERG, V.B., inzh.

Study of vibrational combustion in the combustion chambers of gas turbines systems. Energ. i elektrotekh. prom. no.1:28-30 Ja-Mr '65. (MIRA 18:5)

SHTEYNBERG, V. M.

PHASE I BOOK EXPLOITATION SOV/4959

Ural'skoye soveshchaniye po spektrosk.

Materialy 2 Ural'skogo soveshchaniya po spektroskopii, Sverdlovsk, 1958 g. (Materials of the Second Urals Conference on Spectroscopy, Held in Sverdlovsk, 1958) Sverdlovsk, Metallurgizdat, 1959. 206 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Ural'skiy filial Akademii nauk SSSR. Komissiya po spektroskopii and Ural'skiy dom tekhniki VSNTO.

Eds.: Aron Borisovich Shayevich and Gennadiy Pavlovich Skornyakov; Tech. Ed.: R. M. Matlyuk.

PURPOSE: This collection of articles is intended for spectral analysis laboratory workers at ferrous and nonferrous metallurgical plants, and for laboratory personnel of the metal-working industry, geological and prospecting organizations, and similar scientific research laboratories.

COVERAGE: The collection contains papers read at the Second Urals Conference on the spectral analysis of ferrous and nonferrous metals and alloys, slags, ores, agglomerates, refractories and other materials used in industry. The material of the conference includes articles on the analysis of steels (including the determination of gases), ferroalloys, nonferrous and light metals and alloys, pure noble metals, etc. The present volume is intended to disseminate the latest experience in working with spectral laboratories, and to report on the results of scientific research. The author thanks R. I. Outkina and Yu. M. Buravlev. Almost all of the articles are accompanied by references.

Kuranov, A. A., and M. M. Sviridova. Spectral Analysis of Silver-Copper Alloys From a Standard of Silver and of any Silver-Copper Alloy 116

Kuranov, A. A., N. I. Chentsova, and V. D. Ponomareva. Methods of Preparing Standards for the Spectral Analysis of Spongy Iridium and Rhodium 123

Pankratova, N. I., A. D. Out'ko, N. M. Bastrakova, and Z. N. Kozyayeva. Spectral Method of Analyzing Refined Iridium and Ruthenium 128

Outkina, R. I. Spectrochemical Analysis of High-Purity Antimony 134

Shtutman, M. N., and Ye. V. Zvereva. Some Problems in the Spectral Analysis of Slags, Ores, and Agglomerates 138

Shtutman, M. N., V. P. Avdeyenko, Ye. V. Zvereva, V. M. Shteynberg, and T. A. Yeremeyeva. Possibility of Using a Pulse-Source for the Analysis of Slags and Agglomerates 146

Lytkina, N. I., and G. P. Preobrazhenskaya. Spectral Determination of Oxides of Vanadium, Magnesium, and Calcium in Agglomerate by the Dilution Method 154

Makhner, Yu. A., and A. M. Shavrin. Determination of Titanium in Titanomagnetites and Slags by the Dilution Method 157

Semkina, N. V. Spectral Analysis in the Refractories Industry 159

Finkin, K. Z. Investigation of Certain Characteristics of Vaporization and Excitation of Elements in Assay-With-Graphite Mixtures in the Spectral Analysis of Ores and Minerals 166

Lesnikova, Ye. N. Effect of Certain Factors on the Intensity of Spectral Lines in the Nonconducting Powdered Assays 170

Kolokol'nikova, R. P., and Ya. D. Raykhbaum. Spectrographic Determination of Niobium and Tantalum in Products of Ore Dressing 176

Prokhorov, V. G. Application of Visual Spectroscopy Methods in the Analysis of Rock, Ores, and Minerals 180

Shilenko, R. S. Experience in Operating the Spectral Laboratory of a Geological Prospecting Party 184

Narbutovskikh, T. S., O. D. Frenkel', and A. P. Kopylova. Spectral Determination of Indium and Germanium in Sublimates of Copper-Smelting Plants 186

Shubina, S. B. Spectral Analysis of Saline and Alkaline Baths Used in the Heat Treatment of Steel Products 188

Fedos, F. Z. Low-Voltage Pulse-Discharge Generator for Exciting Spectra 191

Turko, M. M. Mehtod of Taking Into Account Background and Impurities in Practical Work at a Plant Spectral Laboratory. 194

Recommendations of the 2nd Urals Conference on Spectroscopy 202

SHTEYNBERG, V.M.; ATENKOV, S., tekhn. red.

[New method for calculating a nonsteady-state temperature field for a semi-infinite inhomogeneous complex of bodies in mutual thermal contact; Conference on Heat and Mass Transfer, Minsk, January 23-27, 1961] Novyi metod rascheta nestatsionarnogo temperaturnogo polia dlia polubeskonechnogo neodnorodnogo kompleksa tel, nakhodiashchikhsia vo vzaimnom teplovom kontakte; soveshchanie po teplo-i massoobmenu, g. Minsk, 23-27 ianvaria 1961 g. Minsk, 1961. 17 p. (MIRA 15:2)

(Heat--Transmission) (Thermodynamics)

SHTEYNBERG, V.V.

18(4) PHASE I BOOK EXPLOITATION SOV/1896

Akademiya nauk SSSR. Institut metallurgii

Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody issledovaniya (Metallurgy, Study of Metals, and Physicochemical Methods of Investigation) Moscow, Izd-vo AN SSSR, 308 p. (Series: Its: Trudy, vyp. 3) Errata slip inserted. 3,000 copies printed.

Resp. Ed.: I.P. Bardin, Academician; Ed. of Publishing House: A.N. Chernov; Tech. Ed.: I.F. Kuzmin.

PURPOSE: This book is of interest to researchers in metallurgy, as well as to the technical personnel of the metallurgical industry.

COVERAGE: This volume of the Trudy (Transactions) of the Institut metallurgii imeni A.A. Baykova (Metallurgical Institute im. A.A. Baykov) contains 31 studies on metallurgy, individual metals and alloys, and physicochemical methods of investigation. Some of the studies pertain to the reduction of titanomagnetites, the viscosity and other characteristics of blast furnace slag, dislocation in metals, cracking of metals due to corrosion, simultaneous

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solubility of metals at various temperatures, apparatus for measuring electrical resistance and for determining the melting point of alloys and metals, optical spectral analysis, quantitative determinations by the sublimation method, and aging of alloys. Each study is accompanied by references.

TABLE OF CONTENTS:

Metallurgy, Study of Metals (Cont.) SOV/1896

Kiselev, N.A. Apparatus for Measuring Electrical Resistance and for Determining the Melting Point of Metals and Alloys 268

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Borovskiy, I.B., A.Ya. Shteynberg, and V.V. Bogulova. Quantitative Determination of Bi, Pb, Zn, and Cd Content in Silicon With Increased Sensitivity by the Sublimation Method 283

Kusakova, Ye.N. Determination of Gallium Content in Gallium-copper and Gallium-magnesium Alloys 289

Kusakova, Ye.N. Determination of Lanthanum and Thallium Content in the La-Tl Alloy 292

Pavlov, I.M., and V.Ya. Mezis. Effect of Change in the Plastic Deformation Direction (Sign) on Certain Properties of Metals 295

AVAILABLE: Library of Congress

(11)

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Card 6/6

3,9300

31941
S/619/61/000/016/004/005
D055/D114

AUTHOR: Shteynberg, V.V.

TITLE: Recording earthquakes at a high unwinding rate

SOURCE: Akademiya nauk SSSR. Institut fiziki Zemli. Trudy, no. 16(183), Moscow, 1961. Voprosy inzhenernoy seysmologii, no. 4, 84-86.

TEXT: This is a description of a starting device which is used to record earthquakes with the aid of a ПОБ-14 (POB-14) loop oscillograph with a high unwinding rate. If a seismic station operates all day, the rotation of the drum and recording device as a rule does not exceed 240 mm/min. The resulting record of an earthquake is compressed in time. In such bands, it is very difficult to find separate amplitudes and the amplitude-frequency spectrum and to measure vibration periods. All this would be much easier if the unwinding rate were 1-2 cm/sec. Therefore, the idea arose of using loop oscillographs of types POB-12 and POB-14 for earthquake registration. An ФЭСС3 (FESS3) signaller with a heavy-current relay of type РКС-2 (RKS-2) or RKS-3 was used as the starting device, which operates as follows: An ФСК-2 (FSK-2) or FSK-1 photo-resistance is put in the circuit of the grid of an 1Б2П(1B2P) tube (fig. 1). In an earthquake, a ray of light from a ГБ-III (GB-III) or GB-IV mirror galvanometer falls onto the light-sensitive surface of the photo-resistance. A positive impulse enters the

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Recording earthquakes ...

grid of the 1B2P tube which is opened and the current through it increases. The constant component of the current passes through two windings 1-2 and 3-4 of an РП -5 (RP-5) relay switched on in series. The RP-5 relay reed touches a plate and through this contact the heating battery closes into winding 1-2 of the RP-4 relay. The current flows through the loops 1-2 and the RP-4 relay reed touches a contact. Current flows from a small 3-5 v battery E_2 through an RKS-2 winding. The contacts of this heavy-current relay complete the supply system of the POB-14 oscillograph. When it is switched on, registration of the earthquake begins. Before the impulse passes through, the RP-4 relay reed contacts the upper plate and the capacitor C_3 is earthed through a 10 k-ohm resistance R_6. When the impulse arrives, contact between the upper plate and the reed is broken and the capacitor C_3 starts to be charged from the anode feed source through the resistance R_5. Charging continues until the voltage on the capacitor's plates reaches the firing potential of the МН-3 (MN-3) neon tube: current then passes through this and winding 3-4 of the RP-4 relay, whose reed now contacts the upper plate. The device is then ready to receive the next impulse. The charging time for the capacitor, during which the oscillograph is switched on, depends on the anode voltage, the MN-3 firing threshold and

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D055/D114

the specifications of the resistance R_5 and capacitor C_3. In the given case the time was 40-50 sec, during which the earthquake was, as a rule, completely registered. A series of recordings with an unwinding rate of 1 cm/sec and more was obtained. A galvanometer built into the magnetic system of the oscillograph was used to start the latter. Time-markings were made on the band every 0.4 sec. The time-marker was constructed on a curcuit in which the impulse was fed from a 3-4 v battery through a 100-150 ohm resistance and a clock contact device into a GB-V or GB-IV galvanometer. The starting mechanism has a fault which limits its use, in that the first entry of the longitudinal wave is lost because of inertia in the motor of the oscillograph band-winding mechanism. The system takes 0.5-0.7 sec to begin full operation, but this period depends on the capacity of the motor and may be reduced. There are 2 figures and 2 Soviet references. [Abstracter's note: Essentially verbatim translation].

Card 3/3

GORYACHEV, A.V.; YERSHOV, I.A.; KIRILLOV, F.A.; KUZIN, I.P.;
LYAMZINA, G.A.; MEDVEDEV, S.V.; POPOV, V.V.; FEDOTOV, S.A.;
SHTEYNBERG, V.V.

Seismic microzoning of the Petropavlovsk-Kamchatskiy area.
Trudy Inst. fiz. Zem. 28 Vop. inzh. seism. no.8:3-60 '63.
(MIRA 16:11)

L 15306-65 EWT(1)/EWA(h) Peb AFWL/AFETR GW
ACCESSION NR: AT4045971 S/2619/64/000/033/0011/0024

AUTHOR: Shteynberg, V. V. B

TITLE: Analysis of ground oscillations from near earthquakes

SOURCE: AN SSSR. Institut fiziki Zemli. Trudy*, no. 33(200), 1964. Voprosy* inzhenernoy seysmologii (Problems of earthquake engineering), no. 9, 11-24

TOPIC TAGS: earthquake, seismicity, seismic energy, earthquake-proof construction, seismic microzoning, earthquake engineering

ABSTRACT: The principal problem in seismic microzoning is taking into account the influence of geological conditions on the intensity of seismic oscillations at a particular point. On the basis of a map of the distribution of earthquake foci recorded at Petropavlovsk-Kamchatskiy during the period November 1961-March 1963, 36 earthquakes with focal depths of 5--150 km were analyzed; epicentral distances were 30-300 km. Analysis was based on data from four seismic stations in the city, no more than 5 km apart. In such a geologically and tectonically complex area 5 km is the maximum distance admissible. Geological conditions at each point are described in detail. The article presents a detailed discussion of the dependence of the amplitudes of oscillations on ground conditions. It is noted that there is a scattering in the values A_{ground}/A_{rock} (A is amplitude) from earthquake to earth-

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ACCESSION NR: AT4045971

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quake; this reveals the complex character of the influence of local geological conditions on the intensity of seismic oscillations. Data are presented showing that a structure whose seismic resistance is based on mean A_{ground}/A_{rock} values is not guaranteed fully against damage, since in individual cases the earthquake intensity can appreciably exceed this mean computed value. An evaluation of the destructive effect of an earthquake requires a knowledge of the spectral composition of oscillations during strong earthquakes; an effective method of frequency analysis is presented. Particular attention is given to the fact that transverse waves represent the greatest danger to structures. Among the conclusions drawn are that the spectra of near earthquakes contain frequencies from 0.5 to 15 cps, in some cases up to 20 cps, that the principal maxima in the spectra of displacements, velocities and accelerations lie in the region of frequencies from 0.8 to 11 cps, and that the position of the principal maximum in the spectrum of oscillations on the rock area varies from earthquake to earthquake. At the same time, in the spectra of oscillations of unconsolidated ground, there is a principal spectral maximum whose position is stable from earthquake to earthquake. This fact can serve as an indication of the resonance character of the oscillations of the unconsolidated stratum; such a stratum is sort of a "filter-amplifier" with a fixed pass band. It is emphasized that the influence of ground conditions at a point of observation is apparently one of the most important factors which should be considered when interpreting near earthquakes.

Card 2/3

L 15306-65

ACCESSION NR: AT4045971

ASSOCIATION: Institut fiziki Zemli AN SSSR (Institute of Physics of the Earth, AN SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 012 OTHER: 000

Card 3/3

L 20424-66 EWT(1)/EWA(h) GW

ACC NR: AT6007194 SOURCE CODE: UR/2619/65/000/036/0003/0033

AUTHOR: Yershov, I. A.; Medvedev, S. V. (Professor); Fedotov, S. A.; Shteynberg, V. V.

24

ORG: none*

B+1

TITLE: Seismic microregionalization of Petropavlovsk (Kamchatka)

SOURCE: *AN SSSR. Institut fiziki Zemli. Trudy, no. 36 (203), 1965. Seysmicheskoye mikrorayonirovaniye; voprosy inzhenernoy seysmologii (Seismic microdistricting; problems of engineering seismology), no. 10, 3-33

TOPIC TAGS: seismicity, seismic mapping, seismic survey, microregionalization

ABSTRACT: The city of Petropavlovsk (Kamchatka) lies in seismic zone IX (according to the new map of seismic zones of the USSR), a few tens of kilometers from the Pacific Ocean seismic belt. The slope of the basin off southern Kamchatka is one of the most active segments of the circum-Pacific belt. The city lies in the northeastern part of the Kurile-Kamchatka folded zone. The geomorphology and geology of the district are described briefly. Investigations over a period of three years (1961—64) by the Pacific Ocean Seismic Expedition of the Institute of Geophysics, AN SSSR, on Kamchatka have led to refinement of intensity data for Petropavlovsk (Kamchatka) and have permitted compilation of maps showing divisions of the city into seismic subdistricts. This work represents the first combined operation of instrumental work for such detailed subdivisions of seismic districts. Data include

UDC: 550.34

Card 1/2

L 20424-66
ACC NR: AT6007194

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recordings of nearby earthquakes by automatic equipment, measurements of longitudinal and transverse wave velocities, and measurements of microseisms. The work has furnished better data for compiling maps of seismic districts and for comparing different methods of determining intensity increments by instrumental recording. Different instrumental methods have shown rather good agreement. It is noted that the most valuable information concerning possible seismic activity may be obtained by analyzing ground movements from nearby earthquakes by means of automatic equipment. An essentially new aspect of the maps is the delineation of zones with different spectra of earthquake effects on buildings and other structures. This is an important contribution to engineering practice in constructing earthquake-proof buildings. At many points in zones of scale IX along the Kamchatka coast and on the Kuriles, geologic conditions of bedrock and soils are similar to those in Petropavlovsk (Kamchatka). The same technique of dividing into districts has been followed, but where instrumental data have not been available, characteristics of bedrock and soils as observed at Petropavlovsk have been used as the basis for delineating districts. Orig. art. has: 13 formulas, 14 figures, and 4 tables. [04]

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 034/ OTH REF: 006/ ATD PRESS: 4222

Card 2/2 vlr

L 20425-66 EWT(1)/EWA(h) GW

ACC NR: AT6007195 SOURCE CODE: UR/2619/65/000/036/0034/0045

29
27
BH

AUTHOR: Shteynberg, V. V.

ORG: none*

TITLE: Effect of a layer on the amplitude-frequency spectra of waves at the surface

SOURCE:*AN SSSR. Institut fiziki Zemli. Trudy, no. 36 (203), 1965. Seysmicheskoye mikrorayonirovaniye; voprosy inzhenernoy seysmologii (Seismic microdistricting; problems of engineering seismology), no. 10, 34-45 12,[illegible]

TOPIC TAGS; seismic wave, seismic wave spectrum

ABSTRACT: The author considers the effect of an unconsolidated stratum on the SH wave obliquely incident on the base of a formation which rests on bedrock. The SH wave is a horizontally polarized shear wave and is commonly the most intense wave from nearby earthquakes because its energy is not attenuated in transformation to a different type of wave. Comparison of computed with experimental data shows that the principal maximum is most stable in respect to frequency in both theoretical and actual resonance curves. The maxima and minima of experimental resonance curves change in amplitude and frequency, and it is therefore proper to indicate zones of frequency maxima and minima rather than fixed values. The less consolidated the medium and the nearer the wave to the vertical, the sharper the resonance curve, the greater the amplitude maxima, and the lower the minima. The results agree with theoretical computations. As the layer of unconsolidated material increases, the

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L 20425-66

ACC NR: AT6007195

2

resonance curves show a shift toward the low-frequency zone. Experimental data show that for friable alluvium, 20—100-m thick and resting on bedrock (having 2—5 times the acoustic rigidity), the wave amplitude from nearby earthquakes at the surface of the formation may be 2—5 times that in the bedrock. The principal maximum lies in the 1—6-cps interval, near the natural frequencies of most ordinary buildings. The author expresses his thanks to L. N. Malinovskaya for her aid in writing this report and also to the laboratory technician L. B. Yershov for his work in conducting field experiments. Orig. art. has: 7 figures, 2 tables, and 7 formulas. [04]

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 010/ OTH REF: 004/ ATD PRESS: 4222

Card 2/2

ARTAMONOV, Ye.; SHTEYNBERG, Ya.; GALILEYEV, M.

Strength calculation of circular culvert sections. Avt. dor. no.10:24-25 O '64. (MIRA 17:12)

SHTEYNBERG, YA. A. ШТЕЙНБЕРГ Я, А

LYSAYA, L. S. Institut Arkhitektury Sooruzheniy Akademii Arkhitektury USSR. i TKACHENKO, V. A. Ml. Nauchnyye Sotrudniki, SHTEYNBERG, YA. A. Ch.-Korr. Akademii Arkhitektury USSR

Seriya 2-etazhnykh shlakoblochnykh zhilykh domov s primeneniyem konsturktsiy zabod skogo izgotovleniya Page 73

SO: Collections of Annotations of Scientific Research Work on Construction, completed in 1950. Moscow, 1951

5(3)

SOV/79-29-8-66/81

AUTHORS: Dokunikhin, N. S., Oksengendler, G. M. (Deceased), Shteynberg, Ya. B.

TITLE: Derivatives of the Benz-(c,d)-indoline. III. The Salts of 1-Methyl-2-methylthiobenz-(c,d)-indolinium and the Products of Their Condensation With Compounds Containing an Active Methylene Group

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2742-2745 (USSR)

ABSTRACT: N-methylthionaphthostyryl [1-methyl-2-thiono-benz-(c,d)-indoline] (I), described already earlier by Dokunikhin (Ref 3), reacting with dimethylsulphate forms a satisfactory quantity of the methylsulphate of 1-methyl-2-methylthiobenz-(c,d)-indolinium (II). The latter decomposes if the air is humid and separates methylmercaptan. The more stable iodide (III) was obtained from (I) under the influence of methyl iodide (Scheme 1). The quaternary salts condensate easily with compounds containing an active methylene group, forming colored products. When (II) is heated with ethylcyanacetate in anhydrous alcohol in the presence of triethylamine, the yellow indoline (IV) (Scheme 2) is formed. Under the same conditions the following products of a violet color were obtained: by condensation with acenaphthenone and

Card 1/2

Derivatives of the Benz-(c,d)-indoline. III. SOV/79-29-8-66/81
The Salts of 1-Methyl-2-methylthiobenz-(c,d)-indolinium and the Products of Their Condensation With Compounds Containing an Active Methylene Group

indoxyl 2-(1-acenaphthanyliden-2-on)-N-methyl-benz-(c,d)-indoline (V), 2-(2-indolinyliden-3-on)-N-methyl-benz-(c,d)-indoline (VI), by condensation with 1-n-tolyl-3-methylpyrazol-5-on the blackish-brown 2-(1-n-tolyl-3-methyl-4-pyrazolyliden-5-on)-N-methyl-benz-(c,d)-indoline (VII). All three products dissolve in organic solvents only, but dye acetate fibers. The absorption spectra of these products are shown in the figure. A comparison of the absorption spectrum of (V) with that of the 1-acenaphthene indigo (λ_{max} = 552 mμ) shows that the substitution for the 3-oxoindole residue of the 1-methyl-benz-(c,d)-indoline residue leads to a hypsochromic shift of the maximum by 8 mμ. This phenomenon is even better marked in the comparison of (VI) with indigo. There are 1 figure and 4 references, 3 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley (Scientific Research Institute of Organic Semi-finished Products and Dyes)

SUBMITTED: June 21, 1958

Card 2/2

ShTEYNBERG, Ya B., Cand Chem Sci -- (diss) "Investigation of the Dye Derivatives of Benz- (c,d)-indoline," Moscow, 1960, 13 pp, 150 copies (Moscow Chemico-technological Institute im D. I. Mendeleyev) (KL, 49/60, 126)

DUKUNIKHIN, N.S.; SHTEYNBERG, Ya.B.

Azine dyes, derivatives of N-methylbenz-(c,d)-indoline. Zhur. VKHO 5 no.1:110-111 '60. (MIRA 14:4)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley imeni K.Ye. Voroshilova.

(Dyes and dyeing) (Pyridine)
(Indoline)

DOKUNIKHIN, N.S.; SHTEYNBERG, Ya.B.

Monomethinecyanine derivatives of benz-(c,d)-indoline.
Zhur. VKHO 5 no. 2:239-240 '60. (MIRA 14:2)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley imeni K.Ye. Voroshilova.
(Benzindolinium compounds)

DOKUNIKHIN, N.S.; SHTEYNBERG, Ya.B.

Derivatives of benz[c,d]indoline. Part 5: Monomethinecyanines derivatives of benz[c,d]indoline. Zhur.ob.khim. 30 no.6: 1989-1992 Je '60. (MIRA 13:6)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley.
(Benzindoline) (Cyanines)

DOKUNIKHIN, N.S.; SHTEYNBERG, Ya.B.

Derivatives of benz [c,d] indoline. Part 12: Benz[c,d]indoline-2-oximes and benz[c,d]indoline-2-hydrazones. Zhur. ob. khim. 34 no.10: 3359-3362 O '64. (MIRA 17:11)

1. Filial Nauchno-issledovatel'skogo instituta poluproduktov i krasiteley v g. Rubezhnoye.

KUZ'MINA, V.K.; PRAVOVEROV, K.N.; SHTEYNBERG, Ya.G.

Calculating infrared systems of heating taking into consideration physiological characteristics. Nauch. trudy AKKH no.23:71-81 '63. (MIRA 17:12)

Shteyberg, YA.I.

USSR/Engineering - Machine tools

Card 1/1 Pub. 128 - 19/34

Authors : Romanov, B. D., and Shteyberg, YA. I.

Title : The automatic feed of cylindrical blanks into punching die

Periodical : Vest. mash. 12, 64-65, Dec 1954

Abstract : A description is presented of a punching die produced by the "Schetmash" factory for punching holes in cylindrical blanks which are fed into the die automatically. Drawings.

Institution : ....

Submitted : ....

ALEKSANDROV, Ye.A.; SHTEYNBERG, Ya.I.

Gauges used for checking the shape and location of complex cross-section contours. Stan.i instr. 28 no.4:21 Ap '57. (MLRA 10:5)

(Gauges)

SHTEYNBERG, Ya.I.

Use of die sets in small-run and batch production. Kuz.-shtam. proizv. 4 no.9:46-47 S '62. (MIRA 15:9)
(Dies (Metalworking)) (Sheet-metal work)

SHTEYNBERG, Ya.M.

Pressure of cohesive soils on pipe sections. Transp. stroi. 15 no.9:48 S '65. (MIRA 18:11)

1. Glavnyy spetsialist tekhnicheskogo otdela Leningradskogo gosudarstvennogo proyektno-izyskatel'skogo instituta Gosudarstvennogo proizvodstvennogo komiteta po transportnomu stroitel'stvu SSSR.

VAS'KOVSKIY, G.Ya.; SHTEYNBERG, Ya.M.

Cleaning gas passages with use of boring equipment. Podzem. gaz. ugl. no.1:64-66 '59. (MIRA 12:6)

1. Lisichanskaya stantsiya "Podzemgaz.
(Coal gasification, Underground)
(Boring machinery)

ARTAMONOV, Ye.A., inzh.; SEROV, V.A., inzh.; SHTEYNBERG, Ya.M., inzh.

Selecting effective types of culverts for railroad lines. Vop. tip.most.soor. no.4:128-137 '59. (MIRA 13:8)
(Culverts)
(Railroads--Construction)

SHTEINBERG, E. I.

METALLURGICAL LITERATURE CLASSIFICATION

Kukolev, G. V., Dudavskii, I. E., Amerikov, A. V., and Shteinberg, E. I. SINTERING OF HIGHLY REFRACTORY MATERIALS. *Sbornik Rabot Ukrain. Nauch.-Issledovatel. Inst. Ogneuporov.*, No. 46, 117-54 (1940).—A number of methods are given for the production of dolomite refractories.

R

Kukolev, G. V., and Shteinberg, E. I. APPLICATION OF PHASE EQUILIBRIA TO HIGHLY REFRACTORY DOLOMITIC COMPOSITIONS. *Ogneupory*, 10 [4-5] 34-39 (1945). The system discussed is $CaO-MgO-2CaO \cdot SiO_2-5CaO \cdot 3Al_2O_3$. The compositions analyzed are taken from the phase diagram compiled by McMurdie and Insley (*Ceram. Abstracts*, 15 [8] 260 (1936)). Best results in resistance to high temperatures and to slag corrosion may be expected from dolomitic refractories containing a minimum of R_2O_3 and having a maximum coefficient of saturation and a maximum content of free CaO or MgO. In this respect dolomitic compositions containing free CaO or mixed water resistant dolomitic magnesitic masses are preferable to water resistant purely dolomitic, i.e., containing no free CaO, compositions. The most refractory compositions in this class are those whose coefficient of saturation approaches unity and which contain a minimum of sesquioxides. Where $Al_2O_3/Fe_2O_3 < 0.64$, the coefficient of saturation is calculated from the following formula

$$\text{coeff. of satn.} = \frac{CaO - 0.7Fe_2O_3 - 1.1Al_2O_3 \quad 1.8R_2O_3}{2.8SiO_2}$$

and where $Al_2O_3/Fe_2O_3 > 0.64$, the coefficients of Fe_2O_3 and Al_2O_3 in the formula become 0.35 and 1.65, respectively.

Compilers: SHTEYNBERG, Ye. I.; YUZEPCHUK, S. V.; AFANAS'YEV, K. S.; BORISOVA, A. G.; VASIL'YEV, V. N.; GORSHKOVA, S. G.; ILIN, M. M.; KLOKOV, M. V.; MALEYEV, V. P.; MURAV'YEV, O. A.; POBEDIMOVA, Ye. G.; POYARKOVA, A. I.; PROKHANOV, Ya. I.; KOMAROV, V.L. (Acad.); Editors: SHISHKIN, B. K.; BOBROV, Ye. G.

Flora of the USSR, Vol 15, Moscow-Leningrad, 743 pp., 1950

Book W-22202, 7 Apr 52

SHTEYNBERG, Ye.I.

Genera: Lysimachia, Naumburgia, Plumbagella, Armeria. Flora SSSR 18:255-269; 297-298; 408-411 '52.

(MLRA 6:5)
(Botany)

KOMAROV, V.L., akademik, glavnyy red.; SHISHKIN, B.K., red. izdaniya; BOBROV, Ye.G., doktor biol.nauk, prof.red.; VASIL'CHENKO, I.T., red.; GORSHKOVA, S.G., red.; GRIGOR'YEV, Yu.S., red.; GRUBOV, V.I., red.; DOROFEYEV, P.I., red.; IL'INSKAYA, I.A., red.; KLOKOV, M.V., red.; KUPRIYANOVA, L.A., red.; LINCHEVSKIY, I.A., red.; NOVOPOKROVSKIY, I.V., red.; POBEDIMOVA, Ye.G., red.; POPOV, M.G., red.; POYARKOVA, A.I., red.; SHTEYNBERG, Ye.I., red.; TSVELEV, N.N., red.; SMIRNOVA, A.V., tekhn.red.

[Flora of the U.S.S.R.] Flora SSSR. Moskva, Izd-vo Akad. nauk SSSR, 1958. 775 p. (MIRA 12:7)

1. Chlen-korrespondent AN SSSR (for Shishkin).
(Botany)

BOBROV, Ye.G., doktor biol.nauk, prof.; VASIL'CHENKO, I.T.; GORSHKOVA, S.G.; GRIGOR'YEV, Yu.S.; GRUBOV, V.I.; DOROFEYEV, P.I.; IL'INSKAYA, I.A.; KLOKOV, M.V.; KUPRIYANOVA, L.A.; LINCHEVSKIY, I.A.; NOVOPOKROVSKIY, I.V.; POBEDIMOVA, Ye.G.; POPOV, M.G.; POYARKOVA, A.I.; ~~SHTEYNBERG, Ye.I.;~~ TSVELEV, N.N.; SHISHKIN, B.K., red. izdaniya; SMIRNOVA, A.V., tekhn.red.

[Dicotyledons] Dicotyledons. Moskva, Izd-vo Akad.nauk SSSR, 1959. 775 p. (Akademiia nauk SSSR. Botanicheskii institut. Flora SSSR, vol.23) (MIRA 13:4)

(Dicotyledons)

SHTEYNBERG, Ye.S.; MASHKOV, A. N.

Revising the wage system and transferring the nonferrous metal industry to a shortened work day. Gor. zhur. no.8:39-40 Ag '57.
(Nonferrous metal industry) (MIRA 10:9)
(Hours of labor) (Wages)

ER , Ye.S.

137-58-5-9263

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 69 (USSR)

AUTHORS: Shteynberg, Ye.S., Mashkov, A.N.

TITLE: Conversion of Nonferrous Metallurgy Establishments to a Shorter Working Day and a New Wage System (O perevode predpriyatiy tsvetnoy metallurgii na sokrashchennyy rabochiy den' i na novyye usloviya oplaty truda)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 11-12, pp 2-8

ABSTRACT: Bibliographic entry

1. Industry--USSR 2. Employee relations--USSR

Card 1/1

SHTEYNBERG, Ye.S.

137-58-5-9262

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 69 (USSR)

AUTHORS: Shteynberg, Ye.S., Mashkov, A.N., Drize, I.D.

TITLE: Introduction of a New Wage System for Workers in Nonferrous Metallurgy Establishments (Opyt vvedeniya novykh usloviy oplaty truda rabochikh na predpriyatiyakh tsvetnoy metallurgii)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 15, pp 31-34

ABSTRACT: Bibliographic entry

1. Metallurgy--USSR 2. Labor--Standards

Card 1/1

SHTEYNBERG, Ye.S.; MASHKOV, A.N.; DRIZE, I.D.

Some problems concerning wages. Biul. TSIIN tsvet. met. no. 5:33-35 '58. (MIRA 11:7)

(Nonferrous metal industries)
(Wages)

DRIZE, Iosif Davydovich; MASHKOV, Aleksandr Nikitich; SHTEYNBERG, Ye.S., red.; AVRUTSKAYA, R.F., red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[Wage organization in nonferrous metal mines] Organizatsiia zarabotnoi platy na rudnikakh tsvetnoi metallurgii. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 295 p. (MIRA 12:9)
(Wages) (Mine management)

SHTEINBERG, YU. G.

PROCESSES AND PROPERTIES INDEX

20

Mechanism of setting and hardening of lime-pozzuolana cements. I. ~~Absorption of lime by siliceous additions~~. Yu. G. Shteinberg (Leningrad City Construction Dept.). ~~J. Applied Chem. (U.S.S.R.) 20, 927-37(1947)~~(in Russian).—The assumption that the absorption consists in chem. reaction with active SiO_2, both within the lattice but mainly at the surface of the SiO_2 grains, and adsorption of $Ca(OH)_2$ crystals owing to the neg. surface charge of SiO_2, was tested and confirmed by detns. of the electrokinetic potential ζ by measurements of the velocity of electroösmosis u. "Si-stoff," the residue of H_2SO_4 extn. of clay, with an initial $\zeta = -5.15$ mv., in contact with $Ca(OH)_2$ (1.2 mg. CaO/cc.), acquires a pos. ζ after 45 min.; this reaches a max. (+4.70 mv.) after 3 hrs., then decreases gradually, becomes neg. again (24 hrs.) and reaches eventually a const. neg. value of about −3.7 mv. The sharp bends of the u and ζ curves are accompanied by increased absorption of $Ca(OH)_2$, detected analytically. The restoration of the neg. ζ is due to diffusion of $Ca(OH)_2$ into the interior of the grain, resulting in an impoverishment of the soln. which forces desorption of $Ca(OH)_2$ from the surface. The concn. corresponding to const. u and ζ coincides with the limiting equil. concn., 0.085 mg. Ca/cc., in contact with the Si-stoff. This concn. corresponds to the soly. of monocalcium hydrosilicate. On 2nd addn. of a new portion of $Ca(OH)_2$, after careful decantation of the old soln., the same phenomena are observed again, but the period of charge reversal is longer, i.e. $Ca(OH)_2$ is removed from the surface more slowly, owing to slower diffusion into the grains, already partly impregnated. Repeated renewals of the soln., over 4 months, resulted in an equil. concn. of 0.075 mg. CaO/cc. and final $\zeta = -2.0$ mv. Diln. of the $Ca(OH)_2$ soln. favors diffusion over adsorption, and hence the reversal of charge is suppressed; the same effect is brought about by washing the Si-stoff with H_2O. No reversal of the charge is observed in $Ba(OH)_2$ solns., owing to its lower soly.; the limiting concn. is 0.91 g. BaO/l., corresponding to the soly. of $BaO.SiO_2.6H_2O$. Reaction with $Mg(OH)_2$ is insignificant, as evidenced by the very slight change of u and ζ. Diatomite absorbs $Ca(OH)_2$ slower than Si-stoff; changes of u and ζ are the same, but pos. ζ appear only on 2nd renewal of the soln.; however, after electrodialysis, i.e. removal of excess electrolyte from the surface, absorption of $Ca(OH)_2$ increases and reversal of ζ is observed even on 1st contact. Quartz sand, owing to its low reactivity at room temp., accumulates $Ca(OH)_2$ mainly at its outer surface and remains positively charged even after 14 days, with $u = 9.0 \times 10^{-3}$ cc./min., very close to that (14.7×10^{-3}) of CaO itself. However, at 60°, ζ does revert to neg., diffusion having been accelerated. In contrast to quartz, silica gel absorbs mainly within its pores, the fall of u and ζ is slight and constancy is attained rapidly; reversal of charge is successful only after several repeated renewals of the soln. but even then the charge reverts very rapidly to neg. X-ray diagrams show all the above forms of SiO_2 to be cryst.; absorption of $Ca(OH)_2$ deforms the lattice to some extent; hence the diffusion of $Ca(OH)_2$ into the interior of the grain is chem. in nature. Electron-microscopic photographs of Si-stoff, diatomite, and silica gel (× 28000) show rectilinear outlines of the grains.

N. Thon

COMMON VARIABLES INDEX

AUTHOR INDEX

1ST AND 3RD LETTER

2ND LETTER

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

22

B Shteinberg, Yu. G.

COMMON ELEMENTS

Mechanism of Setting and Solidification of Lime-Pozzuolan Cements. (In Russian.) Yu. G. Shteinberg. *Zhurnal Prikladnoi Khimii* (Journal of Applied Chemistry), v. 20, Nov. 1947, p. 1165-1170.

Modern theories explaining the above mechanism are critically analyzed. Disagreements with experimental data are shown to exist. A new approach from the point of view of the theory of spatial structure formation by coagulation is proposed. 18 ref.

COMMON VARIABLES INDEX

OPEN

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

AUTHOR INDEX

1ST AND 2ND LETTER

3RD AND 4TH ORDERS

MATERIALS INDEX

SHTEYNBERG, YA. G.

Shteynberg, Ya. G. "On the effect of vinsol on cement mixtures,"
Sbornik materialov po kommunal. kho-vu, No. 5, 1948, p. 12-19

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

SHTEYNBERG, Yu., podpolkovnik, voyennyy shturman pervogo klassa

Using astronomical orientators. Av. i kosm. 47 no.2:42-43 F '65.
(MIRA 18:4)

SHTEYNBERG, Yu. G.

Fusibility of faience glazes. Yu. G. Shteinberg and L. N. Nikulina. *Trudy Gosudarst. Nauch.-Issledovatel. Keram. Inst.* 1953, No. 1, 48-56; *Referat. Zhur., Khim.* 1954, No. 47016.—The effect of SrO, PbO, Na_2O, Al_2O_3, and SiO_2 on the crystn. of glazes which imparts dullness to a glaze was studied. The glaze was ground as usual, applied on faience tile with a water absorption of 9-12%, and fired in a Silite furnace. The quality of the glaze was evaluated visually and the presence of crystals in cross sections microscopically. The crystn. ability was studied on cylinders made from pressed glaze powder by the method of forced crystn. The fusibility of glazes for faience was in inverse relation to their crystn. tendency. Fast fusing frits were more apt to crystallize than the slow-fusing high-viscosity frits. The tendency of a frit to cryst. was lowered by mol. substitution of SrO for PbO, the SrO being added as celestine. M. Hoseh

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SHTEYNBERG, YU. G.

MT

7 Method for approximate determination of the viscosity of fritted glazes. Yu. G. Shteinberg. *Trudy Gosudarst. Nauch.-Issledovatel. Keram. Inst.* 1953, No. 4, 24-9; *Referat. Zhur., Khim.* 1954, No. 45289.—A method for detg. the viscosity of fused frit is based on the detn. of the time a fused drop takes to spread to a certain size over a horizontal surface of the same frit. It is assumed that the viscosity of the melt is proportional to the time it takes to spread. The viscosity of one of the tested frits is detd. as usual in a viscometer, and its time of spreading is used as a standard to which the spreading of other frits is compared. A 0.2-g. sample of frit is placed on a graphite scorifier and is heated in a furnace until it fuses and transforms into a drop of definite size. The drop is then placed on a porcelain plate glazed with the same frit, the plate being heated to desired temp. The time which it takes for the drop of frit to spread to a definite diam. is detd. with a stopwatch. The diam. of the drop is detd. by its projection on a screen. The app. is described. M. Hosch

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✓ **Porcelain glaze without lead and with a lower boron oxide content.** Yu. G. Shteinberg, P. S. Padeev, L. V. Romanchuk, and Z. K. Sasstisovskaya. *Trudy Gosudarst. Nauch.-Issledovatel. Keram. Inst.* 1954, No. 1, 18-23; *Referat. Zhur., Khim.* 1955, Abstr. No. 55705.—Porcelain glazes without Pb, with lowered B_2O_3 content, in which CaO is partially replaced with equal wt. amt. of SrO introduced as the naturally found celestine, are developed and introduced in the production. The technological properties of the new glazes with lowered B_2O_3 do not differ from those of the former leadless-celestine glazes contg. 9.7% B_2O_3. The broad firing range, high thermal resistivity, and normal development of underglaze colors are preserved. When the B_2O_3 content is lowered to 6.8%, the normal gloss of the glaze is preserved at a ratio SrO:CaO = 1.62. Lowering the B_2O_3 to 3.4% requires a ratio SrO:CaO = 3.8. The glaze has a compn. (in % by wt.): SiO_2 59.9, Al_2O_3 9.0, B_2O_3 3.4, SrO 9.5, CaO 2.5, MgO 1, Na_2O 11.5, and K_2O 3.2. N. Vasileff

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SHTEYNBERG, YU. G.

USSR/Miscellaneous - Ceramic glazes

Card 1/1 Pub. 104 - 7/12

Authors : Shteynberg, YU. G.

Title : Strontium borate and borateless glazes for faience and potter's clay wares

Periodical : Stek. i ker. 1, 18 - 21, Jan 1955

Abstract : The introduction, at the Kalinin Faience Plant, of a new type of glaze to substitute red lead, for glazing faience and potter's clay wares, is discussed. A description is presented of glazing and sintering processes, and technical data is given on the chemical composition of various types of frits. Four USSR references (1951-1953). Tables.

Institution: .....

Submitted: .....

SHTEYNBERG, Yu.G.

Structural and mechanical properties of kaolin suspensions and of foundry dross. Stek. i ker. 12 no.5:15-18 My '55.
(Ceramic materials) (MLRA 8:8)

SHTEYNBERG, Yu.G.; ROMANCHUK, L.V.

Strontium glazes without boron for faience. Trudy GIKI no.1:38-47 '56. (MIRA 11:5)

(Glazes) (Strontium)

SHTEYNBERG, YU.G.

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✓Crystallization phenomenon of delft glazing and its behavior in the burning process. Yu. G. Shteinberg and L. N. Nikulina. *Steklo i Keram.* 13, No. 5, 16–19(1956).—The use of naphtha for burning delft glaze resulted in the formation of surface crystals on the glaze. Those crystals are related to pseudowollastonite. Several tests were made to det. how to decrease this crystal formation. The samples were made of glass powder (6400 pores/sq. cm.) and pressed into 0.2 g. cylinders. The compns. of samples were changed: first CaO was replaced by SrO with constant MgO (0.9% by wt.), and second the sum of SrO + CaO was replaced by MgO (the ratio of SrO + CaO was kept const. at optimum conditions 1.69:1). The best conditions found for min. crystn. for low-B frit (4.8 mol. % B_2O_3) were: ratio SrO:CaO = 1.69:1, and 0.9% by wt. of MgO. With the increase of MgO from 2.5 to 3.8% the crystals of diopside and pseudowollastonite were formed. The best results for B-free frit: SiO_2 67.8, Al_2O_3 5.2, B_2O_3 none, SrO + CaO + MgO 16.1, Na_2O 8.5, K_2O 0.8, Li_2O 1.6 mol. %. The ratio SrO:CaO = 3.61, and MgO 1.4% by wt.

Alexis N. Pestoff

SHTEYNBERG, Yu.G.

Methods of examining glazes. Stek. i ker. 13 no.9:4-9 S '56.
(MLRA 9:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy keramicheskiy institut.
(Glazes)

SHTEYNBERG, Yu G.

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A new glaze for porcelain. P. P. Budnikov and Yu. G. Shteinberg. *Zhur. Priklad. Khim.* 29, 1305-9(1956); cf. *C.A.* 28, 8201^6.—"Si-stuff" (I), a waste product from the production of $AlCl_3$ from kaolin, appears superficially as a porous mass and under the microscope amorphous. X-ray analysis reveals it as a cryst. mixt. of mullite and cristobalite. The proportion of the former increases, and the latter decreases, with the Al_2O_3 content. In an aq. suspension its electrokinetic potential $\zeta = +13$ mv. Thus it differs from I obtained by the H_2SO_4 extn. of clay (cf. *C.A.* 42, 5194*h*). The best glazes were obtained with I contg. 15-20% Al_2O_3. Lower Al_2O_3 content required a make-up for the deficiency to prevent the accumulation of crystobalite on the surface and the increase in thermal expansion. Higher Al_2O_3 content required a correction by the addn. of SiO_2 to prevent mullitization on cooling. The addn. of bentonite (or dextrin, or starch, 0.5% of total glaze) increased the wettability to the surface and the adhesion between the glaze particles. The addn. of Fe-free Zn (2-3%) increased the whiteness and masked surface faults.

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—I. Bencowitz

SHTEYNBERG, Yu.G.

Methods of investigating glazes. Trudy GIKI no.1:53-63 '57.
(Glazes) (MIRA 11:5)

SHTEYNBERG, Yu. G.

AUTHORS: Shteynberg, Yu.G., Nikulina, L.N. 72-2-6/20

TITLE: Porcelain Glazings With Various Forms of Silicon Dioxide (Farforovyye glazuri s razlichnymi formami kremnezema).

PERIODICAL: Steklo i Keramika, 1958, Nr 2, pp. 14-18 (USSR)

ABSTRACT: Z.K. Sass - Tisovskaya took part in these tests. The authors refer to the works by R. Niderleytner and Ye.V. Yermolayeva [Ref. 1]. The various substances containing silicon dioxide are: quartz, silicon, diatomite, and waste aluminum sulfates (waste products in the production of $AlCl_3$). The task to be performed was to develop glazings without feldspar, which do not require higher temperatures of burning, and which have a number of positive properties: a diminished tendency towards splitting up after burning, increase of the mechanical strength of the products, decrease of dielectric losses, etc. Compositions of glazings were investigated with a ratio between the sum of silicon dioxide and aluminum and alkali earth metal oxides $\frac{S + A}{R\ O}$ equal to 8,5:1; 7:1 and 6:1, and $\frac{S}{A}$ equal to 7:1; 6:1 and 5:1 (in mol percents). Into group RO once calcium- and

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Porcelain Glazings With Various Forms of Silicon Dioxide 72-2-6/20

magnesium oxides, and another time only calcium oxide in the form of chalk was introduced. The chemical composition of glazing raw materials is shown in table 1. Data concerning the appearance of the surfaces of glazing materials after burning at 1350° are shown in table 2. With an increase of the alumina content the gloss of the glazing decreases (fig. 1). Compositions of silicium glazings with an optimum ratio of components are shown in table 3. In the case of rapid cooling accumulations of cristobalite crystals can be observed in the glazing (fig. 2), which, if cooling is delayed, grow in size (fig. 3). If the alumina content is increased, mullite is separated, which causes a loss of gloss in the glazing after burning (fig. 4). Chalk glazing are in all cases dim (fig. 5). The existence of ferric oxides in diatomite gives the glazing a yellow shade, which is permissible for technical porcelain. In the case of porcelain for general use previous chemical treatment of the diatomite by hydrochloric acid and chlorine is necessary, by which diatomite glazings are given a normal white coloring. Diatomite glazings without a content of feldspar are distinguished by a particularly bright gloss. There are 5 figures, 3 tables, and 8 references, 7 of which are Slavic.

AVAILABLE: Library of Congress

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Shteynberg, Yu. G.

15(2)

AUTHOR: None Given SOV/72-59-5-1/23

TITLE: Glass Science at the VIII Mendeleyev Congress (Nauka o stekle na VIII Mendeleyevskom s"yezde)

PERIODICAL: Steklo i keramika, 1959, Nr 5, pp 1-4 (USSR)

ABSTRACT: In the beginning a proclamation of the TsK KPSS to the personnel of the building material industries for a qualitative and quantitative increase of production is mentioned. The Congress took place in Moscow in the second half of March of the current year and was devoted to the 125th anniversary of the great scholar's birthday. Outstanding chemists of the Soviet Union and the People's Democracies attended the Congress. The principal problems of the development of chemistry were discussed at the plenary meetings and the meetings of the 18 Congress sections. Professor I. I. Kitaygorodskiy opened the meetings of the sub-section for glass and gave a survey of the stages of development of Soviet glass production as well as of a number of promising tasks in the field of glass technology. Moreover, the following lectures were held: Doctor Korani (People's Republic of Hungary) investigated the structure of the top-layers of glass;

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A. I. Avgustinnik (LTI imeni Lensovet) discussed the formation of a finely disperse crystalline phase from the glass-like phase; V. V. Vargin and G. O. Karapetyan (GOI) reported on absorption spectra, luminiscence, and photochemical properties of cerium-glass types; A. G. Vlasov (GOI) reported on the quantitative reciprocal relations between ordered and disordered glass phases; Ye. A. Poray-Koshits, Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry of the AS USSR) discussed the reasons for the disagreement on the problem of the structure of glass-like substances; Professor O. K. Botvinkin, N. I. Ananich, and M. L. Mironova, Institut stekla (Glass Institute) reported on the Investigation of the Glass Structure by the Method of Thermal Analysis and Optical Polarization; Ye. V. Podushko (GOI) discussed the new method of electric glass melting and the melting of silicates by means of high-frequency current; Yu. G. Shteynberg reported on strontium-magnesium glazes without lead and boron for faience and majolica which have been developed in the Gosudarstvennyy nauchno-issledovatel'skiy keramicheskiy institut (State Scientific Research Institute of Ceramics); L. S. Yastrebova, and V. S. Molchanov (GOI) discussed the role played by the

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surface protection film in the destruction of silicate glasses; G. I. Veynberg (GOI) discussed the coloring characteristics and the technology of phosphate glasses; O. V. Mazurin (LTI) reported on the mobility of sodium ions in glass types of the system $Na_2O-RO-SiO_2$; Z. A. Nosova (NII Stroykeramika) discussed the process of subduing the glazes by lead oxide and zirconium; L. G. Mel'nichenko, Khar'kovskiy politekhnicheskiy institut (Khar'kov Polytechnic Institute) reported on silicate formation and sintering processes in the briquetted glass layer; K. M. Yevstrop'yev investigated various types of glass; N. N. Semenov (Glass Institute) reported on the determination of impurities in silica by spectroscopic analysis; G. S. Bogdanova, and Ye. M. Orlova (Glass Institute) reported on types of electrode glass which has been devised by them. Yu. V. Rogozhin (Glass Institute) discussed the kinetics of the formation of crystallization centers in photo-sensitive types of glass; Z. M. Syritskaya (Glass Institute) discussed the results of the investigation of the tendency of phosphatic systems towards glass formation; L. A. Grechanik, N. V. Petrovykh, and V. G. Karpechenko (NIIES) reported on the investigation of types of semiconducting oxide glass on the basis of V_2O_5; N. V. Solomin, L. A. Grechanik, I. V. Shpakova, and Ye. A. Faynberg (NIIES) discussed the production of conductive films on types of glass which contain components easily to be regenerated.

PHASE I BOOK EXPLOITATION SOV/5020

Shteynberg, Yuliya Grigor'yevna

Strontsiyevyye glazuri (Strontium Glazes) Moscow, Gosstroyizdat, 1960. 148 p. Errata slip inserted. 2,500 copies printed.

Scientific Ed.: I. Ya. Yurchak, Candidate of Technical Sciences; Ed. of Publishing House: D. S. Kizel'shteyn; Tech. Ed.: Ye. L. Temkina.

PURPOSE: This book is intended for technical and scientific personnel in the ceramics industry, and for builders.

COVERAGE: The book deals with boron- and lead-free strontium glazes and titanium enamels, their production techniques, and research methods. The author discusses the use of these glazes and enamels in the manufacture of wares, in the building industry, and in the production of decorative and general ceramics. The causes for the occurrence of defects in the glazes and methods for their prevention and elimination are also considered. No personalities

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SHTEYNBERG, Yu.G.

Interaction of strontium glazes with faience bodies. Trudy GIKI no.1:46-59 '60. (MIRA 16:1)

(Glazes)

SHTEYNBERG, Yu.G.

Wall-facing tiles made of local low-melting clays. Stek. i ker. 17
no.12:27-33 D '60. (MIRA 13:11)
(Tiles)

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78212
SOV/80-33-3-13/47

AUTHORS: Shteynberg, Yu. G., Mikulina, L. N., Sokolinskaya, O. T.

TITLE: Study of the Crystallization of Boron-Free, Strontium-Calcium Glazes

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 3, pp 582-591 (USSR)

ABSTRACT: Frits and glazes of the above type, all without magnesium, were studied in order to determine the effect of varying quantities of Sr and Ca on their crystallization. Chemical compositions of the frits used are given by Table 1. It was determined that the ability of the frits and of the glazes made from them to crystallize is least at SrO and CaO concentrations corresponding to the minimum of the melting temperature on Eskola's diagram of solid solutions of Sr and Ca metasilicates (Fig. 2). Also, only glazes made from frits 53 and 54 had

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normal luster, and these glazes crystallized less than the others. The existence of these minima is probably related to the greatest degree of imperfection of the structurally rearranging lattice and, possibly, the structure of the solid solution on replacement of the Sr by Ca. A continuous series of solid solutions is formed in the crystallized frits, with an almost linear increase of both indices of refraction (Fig. 1), decrease of specific gravity (Fig. 5), interplanar spacing (Fig. 4), and lattice parameters (Fig. 3), as the Ca content in the mixed crystal increases. The interplanar spacing values of the sample "M" (see Figs. 2 and 4) deviate somewhat from the rule, a fact which should be further investigated. X-ray analysis of the powdered, crystallized frits showed the closeness of all the crystals to the hexagonal system and their complete miscibility in the solid phase. The system may be considered isodimorphic. Shmeleva, N. A., and Kondrat'yeva, V. V., took part in the work. Frank-Kamenetskiy, V. A., is thanked for his advice.

Study of the Crystallization of Boron-Free, Strontium-Calcium Glazes

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Table 1. Chemical composition of investigated frits (wt %). (A) Frit Nr; (B) SrO : CaO (parts by wt)

A	B	SiO_2	Al_2O_3	SrO	CaO	K_2O	Na_2O
51	1.00 : 0	57.7	7.40	23.6	—	3.92	7.40
52	7.45 : 1	58.5	7.70	19.50	2.60	4.0	7.64
53	2.78 : 1	60.0	7.85	14.80	5.32	4.1	7.83
54	1.85 : 1	60.7	7.95	12.50	6.75	4.15	7.93
55	1.23 : 1	61.5	8.05	10.10	8.17	4.2	8.00
56	0.81 : 1	62.1	8.14	7.70	9.70	4.24	8.10
57	0.00 : 1	64.5	8.42	—	14.3	4.40	8.40

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